

S/020/62/147/002/015/021  
B106/B101

AUTHORS: Perevalova, E. G., Gubin, S. P., Smirnova, S. A.,  
Nesmeyanov, A. N., Academician

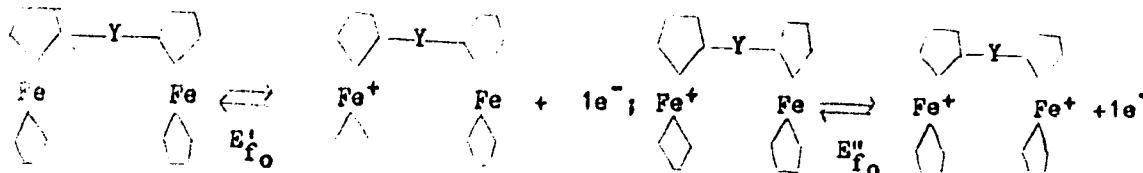
TITLE: Redox properties of compounds containing two ferrocenyl groups

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 2, 1962, 384-387

TEXT: The authors studied the effect produced by one ferrocene ring on the redox properties of a second ferrocene ring bound to the first either directly (diferrocenyl) or by groups Y of different conductivity (-Hg-, -CH<sub>2</sub>- , -CH<sub>2</sub>-CH<sub>2</sub>- , -CH<sub>2</sub>-O-CH<sub>2</sub>- , -CH<sub>2</sub>-N<sup>+</sup>(CH<sub>3</sub>)<sub>2</sub>-CH<sub>2</sub>- ). They measured the first and second redox potentials  $E_{f_0}^{\prime}$  and  $E_{f_0}^{\prime\prime}$  (Table 1). The significance of  $E_{f_0}^{\prime}$  and  $E_{f_0}^{\prime\prime}$  is evident from the following scheme:

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Redox properties of compounds ...

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Under the chosen conditions diferrrocenyl was oxidized at one Fe atom only. When two ferrocene rings interact, the electron density increases at the ring oxidized. The redox potentials indicate that the methylene group transfers to the other nucleus; hardly any of the electron-donor effect of the ferrocenyl group, whereas the effect of the positively charged ferricinium ion is transferred even across bridges of 3 atoms. The investigations covered also how some substituents in the methyl group of methyl ferrocene affect the redox potentials (Table 2): in this case, too, the effect of electron-acceptor substituents was transferred via the methylene group to a notably greater extent than that of electron-donor substituents. There are 4 figures and 2 tables. The most important English-language references are: R. W. Taft Jr., J. Am. Chem. Soc., 75,

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Redox properties of compounds ...

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4231 (1953); H. H. Jaffe, Chem. Rev., 53, 191, (1953).

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: July 18, 1962

Table 1. Redox potentials of compounds with two ferrocenyl groups  
 $C_5H_5FeC_5H_4-Y-C_5H_4FeC_5H_5$  (in v, related to the standard calomel electrode).

Legend: (1) melting point, °C; (2) difterrocenyl; \* obtained by  
reduction of difterrocenyl ketone; (3) with decomposition.

Table 2. Redox potentials of some monosubstituted ferrocenes  
 $C_5H_5FeC_5H_4CH_2X$ . Legend: (1) v, related to the standard calomel electrode;

\* mean deviation from the  $E_{f_0}$  values indicated  $\pm 0.003$  v

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S/020/62/147/003/025/027  
B101/B186

AUTHORS: Nesmeyanov, A. N., Academician, Sazonova, V. A.,  
Gerasimenko, A. V.

TITLE:  $\alpha$ -pyridyl-ferrocene and 1,1'-di-( $\alpha$ -pyridyl)-ferrocene

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 5, 1962, 634 - 635

TEXT: The following syntheses of pyridine compounds of ferrocene, and reactions of these compounds, are described: (1) Ferrocene and a small amount (0.05 g from 3 g initial substance) of  $\alpha$ -pyridyl ferrocene, m.p. 87 - 89°C, were obtained by heating 1,1'-ferrocenylene-diboric acid with copper carbonate in pyridine under an  $N_2$  atmosphere, followed by extraction with ether and chromatographic separation on aluminum oxide. (2) 24%  $\alpha$ -pyridyl ferrocene and 3% 1,1'-di-( $\alpha$ -pyridyl)-ferrocene, m.p. 179 - 180°C were obtained by reaction of ferrocenyl-lithium and 1,1'-dilithium ferrocene mixtures dissolved in ether, under an  $N_2$  atmosphere, with dropwise addition of pyridine and chromatographic separation. (3) Oxidation of  $\alpha$ -pyridyl ferrocene and potassium permanganate in an acid medium was found to yield picolinic acid. (4) A red deposit of  $\alpha$ -pyridyl ferrocene hydro-

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$\alpha$ -pyridyl-ferrocene ...

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B101/B186

chloride, unstable in aqueous solution was obtained by bubbling dry HCl through the ether solution of  $\alpha$ -pyridyl ferrocene. (5)  $\alpha$ -pyridyl ferrocene hydrochloride solution was poured into a tetraphenyl sodium boride solution, yielding a tetraphenyl borate deposit. Examinations of pyridyl ferrocenes are being continued.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: July 31, 1962

Card 2/2

FINASHINA, G.N.; NESMEYANOV, A.N., akademik, glav. red.; TOPCHIYEV,  
A.V., akademik, zam. glav. red.; ISAKOVA, O.V., otv. red.;  
LIKHTENSTEYN, Ye.S., otv. red.; SHUNKOV, V.I., otv. red.

Nikolai Nikolaevich Andreev. Vstup. stat'ia G.A.Ostromova.  
Bibliografiia sostat. G.N.Finashinoi. Moskva, 1963. 58 p.  
(Materialy biobibliografii uchenykh SSSR. Seriya fiziki  
no.14) (MIRA 16:10)

1. Akademiya nauk SSSR.
2. Chlen-korrespondent AN SSSR (for Shunkov).  
(Andreev, Nikolai Nikolaevich, 1880-)

IOFFE, Saveliy Timofeyevich; NESEYANOV, Aleksandr Nikolayevich;  
KOCHESHKOV, K.A., otv. red.; OKHLOBYSTIN, O.Yu., red.;  
DOROKHINA, I.N., tekhn. red.

[Methods of the chemistry of organometallic compounds;  
magnesium, beryllium, calcium, strontium, barium] Metody  
elementno-organicheskoi khimii; magnii, berillii, kal'tsii,  
strontsii, barii. Pod obshchei red. A.N.Nesmeianova i K.A.  
Kocheshkova. Moskva, Izd-vo AN SSSR, 1963. 561 p.  
(MIRA 16:12)

1. Chlen-korrespondent AN SSSR (for Kocheshkov).  
(Organometallic compounds)

S/062/63/000/001/023/025  
B101/B186

AUTHORS: Nesmeyanov, A. N., Anisimov, K. N., Kolobova, N. Ye., and Baryshnikov, L. I.

TITLE: New method of synthesizing rhenium cyclopentadienyl tricarbonyl

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 1, 1963, 193 - 194

TEXT:  $C_5H_5Re(CO)_3$  was obtained in 60% yield by reaction of rhenium pentacarbonyl chloride with sodium or thallium cyclopentadiene in benzene or tetrahydrofuran at 40-50°C. The m.p. of this compound was found to be 110-111°C and not 111-114°C as found by R. L. Pruett, E. L. Morehouse (Chem. and Industr., 1958, 980). ✓

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: November 26, 1962  
Card 1/1

S/062/63/000/001/024/025  
B101/B186

AUTHORS: Nesmeyanov, A. N., Borisov, A. Ye., and Novikova, N. V.

TITLE: Diphenyl stibine

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 1, 1963, 194

TEXT: Reaction of diphenyl antimony chloride with lithium aluminum hydride in anhydrous ether under an atmosphere of argon, produced the hitherto unknown diphenyl stibine,  $(C_6H_5)_2SbH$ , in 50% yield, a colorless liquid, b.p.  $115-120^\circ C/0.5$  mm Hg,  $n_D^{20} 1.6882$ , which quickly decomposes in air with formation of a precipitate.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: November 27, 1962  
Card 1/1

S/062/63/000/001/025/025  
B101/B186

AUTHORS: Nesmeyanov, A. N., Anisimov, K. N., Kolobova, N. Ye., and  
Kolomnikov, I. S.

TITLE: Manganese rhenium decacarbonyl  $(CO)_5Mn-Re(CO)_5$

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh  
nauk, no. 1, 1963, 194

TEXT: Reaction of sodium pentacarbonyl manganese with rhenium pentacarbonyl chloride, or of sodium pentacarbonyl rhenium with manganese pentacarbonyl bromide, in tetrahydrofuran produced the hitherto unknown manganese rhenium decacarbonyl with 60% yield in the form of lemon-yellow crystals, stable in air, m.p. 167°C, readily sublimable in vacuo, and readily soluble in organic solvents. The solutions decompose in air. The Mn-Re distance was found to be 2.96±0.01 Å.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk  
SSSR (Institute of Elemental Organic Compounds of the Academy  
of Sciences USSR)

NESMEYANOV, A. N.; ANISIMOV, K. N.; KOLOBOVA, N. Ye.; KOLOMNIKOV, I. S.

Manganese-rhenium decacarbonyl  $(CO)_5\text{Mn-Re}(CO)_5$ . Izv. AN SSSR.  
Otd. khim. nauk no. 1:194-195 '63. (MIRA 16:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

(Manganese carbonyl)  
(Rhenium carbonyl)

Nesmeyanov A. N.

AID Nr. 982-1 4 June

DIFERROCENYLS AND TERFERROCENYLS (USSR)

Nesmeyanov, A. N., V. N. Drozd, V. A. Sazonova, V. I. Romanenko, A. K. Prokof'yev, and L. A. Nikonova. IN: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 4, Apr 1963, 667-674.

S/062/63/000/004/012/022

A series of substituted diferrocenyls, 1,1'-diferrocenylferrocene, also named 1,1'-terferrocenyl (I), and higher homologues were synthesized at the Moscow State University imeni M. V. Lomonosov by the reaction of a mixture of

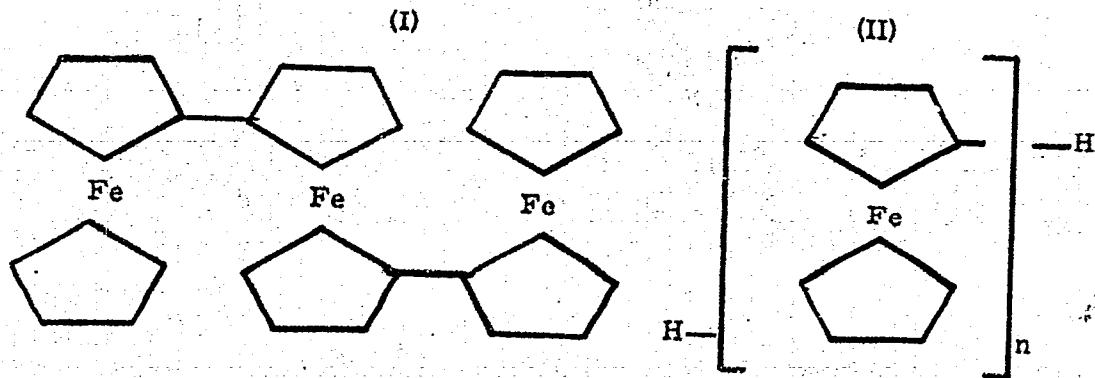
Card 1/4

AID Nr. 982-1 4 June

## DIFERROCENYLS AND TERFERROCENYLS [Cont'd]

S/062/63/000/004/012/022

bromoferrocene and 1,1'-dibromoferrocene with copper at 105-120°C. The following products were isolated by  $\text{Al}_2\text{O}_3$  chromatography: ferrocene, di-ferrocenyl, 1,1'-terferrocenyl with the structure I and homologues II, in which  $n \leq 4$ :



The 1,1'-polyferrocenylenes obtained were diamagnetic. The derivatives of diferrrocenyl and terferrocenyl were also obtained by application of the general

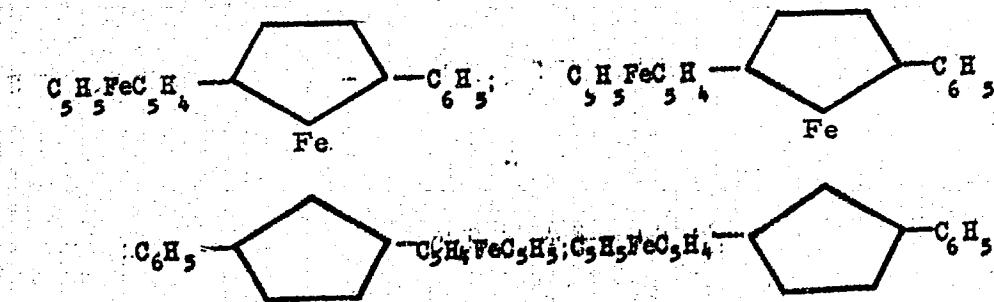
Card 2/4

AID Nr. 982-1 4 June

S/062/63/000/004/012/022

## DIFERROCENYLS AND TERFERROCENYLS [Cont'd]

method for synthesizing ferrocenes, that is, by using substituted cyclopentadienes (in this case, ferrocenylcyclopentadienes) as the starting materials. The synthesis of 3-ferrocenyl-1-phenylcyclopentadiene (III) was achieved by the condensation of acetylferrocene with the ethyl  $\beta$ -benzoylpropionate in the presence of sodium ethylate; III yielded a substituted terferrocenyl - 1,1'-diferrocenyl-3,3'-diphenyl-ferrocene (IV) - after being treated first with sodium amide in liquid ammonia and then with ferrous chloride. Anti and syn structures are ascribed to IV, which could also be in the racemic and meso forms:



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AID Nr. 982-1 4 June

DIFERROCENYLS AND TERFERROCENYLS (Cont.)

s/062/63/000/004/012/022

Investigation of IR spectra indicated that bands with frequencies of 1000 and  
1113 cm<sup>-1</sup> are characteristic for the system of cyclopentadiene rings bound  
together in disubstituted diferrocenyls which contain no free cyclopentadiene  
rings.

[BN]

Card 4/4

trititanium oxane

**ABSTRACT:** Cyclopentadienyl ethoxy titanium bis-(8-oxyquinolate) was obtained by reacting cyclopentadienyl triethoxy-titanium with 8-oxyquinoline in benzene solution. The cyclopentadienyl ring can be split from cyclopentadienyl ethoxy titanium bis-(8-oxyquinolate) with propyl alcohol to yield dipropyloxytitanium bis-(8-oxyquinolate); with water to form the bis (8-oxyquinolate)titanium oxide; or with oxygen to give octaethoxytrititanium oxane. Acetyl chloride acts on cyclopentadienyl ethoxy titanium bis(8-oxyquinolate) to form cyclopentadienyl-titanium-(8-oxyquinolate)chloride. IR curves for both titanium compounds are given. Spectra were obtained at the Institut khimii prirodnykh soyedineniy AN SSSR (Institute of Chemistry of Natural Compounds) by Yu. N. Sheynker and L. B.

Card 1/2

ACCESSION NR: AP3000124

Senyavina, for which the authors express their gratitude." Orig. art. has 2 figures and 1 equation.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR  
(Institute of Organoelemental Compounds, Academy of Sciences SSSR)

SUBMITTED: 28Jun62

DATE ACQ: 12Jun63

ENCL: 00

SUB CODE: CH

NO REF SOV: 001

OTHER: 002

Card 2/2

RYBINSKAYA, M.I.; RYBIN, L.V.; NESMEYANOV, A.N.

Synthesis of aryl- $\beta$ -nitrovinyl ketones and the reactions of these compounds with nucleophilic reagents. Izv.AN SSSR Otd.khim.nauk no.5:899-906 My '63. (MIRA 16:8)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.  
(Ketone) (Substitution (Chemistry))

L 12852-62 EPP(j)/EPP(c)/EWT(m)/EDS S/0062/63/000/006/1036/1045  
ACCESSION NR: AP3002287 Pr-14/Pc-14 RM/W 62

AUTHOR: Perevalova, E. G.; Usty\*nyuk, Yu. A.; Nesmeyanov, A. N.

TITLE: The reactivity of compounds containing the ferrocenylmethyl group. Report  
1. Hydrolytic cracking of tetravalent ammonium salts

SOURCE: AN SSSR. Izv. Otdeleniya khimicheskikh nauk, no. 6, 1963, 1036-1045

TOPIC TAGS: tetravalent ammonium salts, ferrocenylmethyl group, hydrolytic crack-  
ing, rate of hydrolysis

ABSTRACT: A series of tetravalent ammonium salts containing the ferrocenylmethyl group was synthesized, i.e. compounds of the type shown in the enclosure, where RCH<sub>2</sub> sub 2 is methyl, ethyl, n-propyl, n-butyl, n-nonyl, benzyl, allyl, carboxymethyl, phenacyl or ferrocenyl methyl, and the anion X is chloro, bromo, iodo or picryl. Hydrolytic cracking of these compounds in alkaline, neutral and 50% aqueous dioxane

mediate formation of the ferrocenylmethyl group  
formulas, and 1 figure.

Card 1/2

Moscow St. (In.)

L 12228-63 EME(j)/EFF(c)/EMP(g)/EMT(m)/PRC AFETTC/1045/Fe-4/Pr-4 RM/WW/JD/WB  
ACCESSION NR: AP3002288 S/0062/63/000/006/1045/1049 69  
68

AUTHOR: Perevalova, E. G.; Usty\*nyuk, Yu. A.; Nesmayanov, A. N.

TITLE: Reactivity of compounds containing a ferrocenylmethyl group. Report 2.  
Regeneration of tetravalent ammonium salts, containing ferrocenylmethyl radical,  
with sodium amalgam by Emde

SOURCE: AN SSSR. Izv. Otdeleniye khimicheskikh nauk, no. 6, 1963, 1045-1049

TOPIC TAGS: ferrocenylmethyl group, trimethyl ferrocenylmethyl ammonium iodide,  
dimethylallyl ferrocenylmethyl ammonium iodide, dimethylbenzyl ferrocenylmethyl  
ammonium iodide, sodium amalgam

ABSTRACT: The reduction of trimethyl-, dimethylallyl-, and dimethylbenzyl ferro-  
cenylmethyl ammonium iodide with sodium amalgam by the method of Emde and co-  
workers 222, 314, 351; v. 249, 1911, 111, 118, 166;

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R001136620

Hence, ~~benzyl, and more than the methyl radical, and about 1%~~

Card 1/21

NE SMEIANOV, A.N. [Nesmeyanov, A.N.]; FIRSOVA, L.P.

Hot synthesis of the compounds marked with radioactive carbon.  
Analele chimie 18 no.3:33-61 J1-S '63.

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R001136620

FOSS, V.L.; ZHADINA, M.A.; LUTSENKO, I.F.; NESMEYANOV, A.N.

Reaction of ketene with quasiocomplex compounds of mercury.  
Zhur.Ob.khim. 33 no.6:1927-1933 Je '63. (MIRA 16:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.  
(Ketene) (Mercury compounds)

S/020/63/148/006/015/023  
B117/B186

AUTHORS: Nesmeyanov, A. N., Academician, Borisov, A. Ye., Novikova, N. V.,  
Chumayevskiy, N. A.

TITLE: Infra-red absorption spectra of stereo-isomers of propenyl-lithium

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 6, 1963, 1312 - 1313

TEXT: Infra-red absorption spectra of cis- and trans-isomers of propenyl-lithium were studied more accurately in comparison with the results obtained (in a 20% ether solution) earlier (DAN, 119, 712 (1958)) by the same authors, and with those of N. L. Allinger and R. B. Hermann (J. Org. Chem., 26, 1040 (1961)). In order to eliminate the misleading frequencies by which the ether is characterized, the spectra mentioned were taken both in ether solution and in paraffin oil. A comparison of the spectra taken in these media showed the following frequencies to be consistent:

$1625\text{ cm}^{-1}$ ,  $1540\text{-cm}^{-1}$  and  $1300\text{ cm}^{-1}$  in spectra of the cis-isomer;  $1635\text{ cm}^{-1}$ ,  $1550\text{ cm}^{-1}$  in the spectrum of the trans-isomer. Hence the higher frequencies in the infra-red spectrum of propenyllithium of the C-C oscillations

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S/020/63/148/006/015/023  
B117/B186

Infra-red absorption spectra of...

( $1635\text{ cm}^{-1}$  and  $1545\text{ cm}^{-1}$ ) correspond to the trans-isomer, and the lower frequencies ( $1625\text{ cm}^{-1}$  and  $1535\text{ cm}^{-1}$ ) correspond to the cis-isomer. Thus, the infra-red absorption spectra gave results that were in agreement with those obtained by Allinger and Hermann. The conclusions drawn in the above paper from optical and chemical data as to the configuration of cis- and trans-isomers are still valid.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR  
(Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: November 26, 1962

Card 2/2

S/020/63/149/001/013/023  
B144/B186

AUTHORS: Yavorskiy, B. M., Kochetkova, N. S., Zaslavskaya, G. B.,  
Nesmeyanov, A. N., Academician

TITLE: Absorption spectra of some ferrocene derivatives

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 1, 1963,  
111-113

TEXT: Absorption spectra were taken of acyl and alkyl ferrocene derivatives dissolved in isoctane. Results: 1) The break at 528 m $\mu$  described by D. R. Scott, R. S. Becher (J. Chem. Phys., 35, 516 (1961)) was not observed. 2) An almost complete conformity was detected in the absorption spectra (280 - 600 m $\mu$ ) of: a) normal monosubstituted ferrocene homologs, such as monoethyl and mono-n-propyl ferrocene; b) normal heterocyclic disubstituted ferrocene homologs, such as 1,1'-diethyl and substituted acyl derivatives of

1,1'-diacetyl, 1,1'-dipropionyl ...

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S/020/63/149/001/013/023  
B144/B186

Absorption spectra of some ...

spectra of the heterocyclic disubstituted ferrocene derivatives differed from those of the corresponding monosubstituted compounds in the position as well as in the intensity of the absorption bands. 4) The absorption spectra depend on the nature of the substituting group: a) The difference between the absorption bands of ferrocene and its alkyl homologs is only slight. An insignificant hypsochrome shift of the 440  $\mu\text{m}$  band was

and 2 tables.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk  
SSSR (Institute of Elemental Organic Compounds of the  
Academy of Sciences USSR)

Card 2/3

8/020/63/149/001/013/023  
B144/B186

Absorption spectra of some ...

SUBMITTED: December 1, 1962

Card 3/3

S/020/63/149/003/024/028  
B117/B186

AUTHORS: Nesmeyanov, A. N., Academician, Vcl'kenau, N. A.,  
Bolesova, I. N.

TITLE: Ligand exchange in ferrocene

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 3, 1963, 615-618

TEXT: The replacement of a cyclopentadienyl ring by other ligands, performed for the first time, is described. When ferrocene is heated with aromatic hydrocarbons in the presence of aluminum chloride, one of the rings of the ferrocene core is replaced by an aromatic ring and a single charged cation of the aren-cyclopentadienyl iron is formed. Undesired oxidation of the ferrocene brought about by the  $\text{AlCl}_3$  can be prevented by adding a small amount of the borates of the

iron C<sub>38</sub>H<sub>37</sub>Br<sub>2</sub>, m.p. -1

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S/020/63/149/003/024/028  
B117/B186

Ligand exchange in ferrocene

m.p. 237.5-238.5°C. The reaction with naphthalene takes a similar course. The ligand exchange reaction also takes place for substituted ferrocenes, but is more complicated than with ferrocene. Heating diacetyl ferrocene with mesitylene in the presence of AlCl<sub>3</sub> gave the tetraphenyl borate of mesitylene-acetylcylopentadienyl iron: C<sub>40</sub>H<sub>39</sub>OBFe, m.p. 197-198°C

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S/020/63/149/003/024/028  
B117/B185

Ligand exchange in ferrocene

in water and alcohol, m.p. 230-230.5°C. Thermal decomposition of the tetraphenyl borates in vacuo produced ferrocene, some iron and, from the naphthalene derivative, also naphthalene, probably owing to cleavage of the aromatic hydrocarbon and disproportionation of the residue.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the USSR)

SUBMITTED: February 18, 1963

Card 3/3

NESMEYANOV, A.N., akademik; SAZONOV, V.A.; GERASIMENKO, A.V.; SAZONOV, N.S.

Photolysis of  $\alpha$ -pyridylferrocene salts. Dokl. AN SSSR 149  
no.6:1354-1355 Ap '63. (MIRA 16:7)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.  
(Ferrocene) (Photochemistry)

ACCESSION NR: AP3009840

S/0062/63/000/007/1348/1350

AUTHORS: Nesmeyanov, A. N.; Anisimov, K. N.; Kolobova, N. Ye.

TITLE: Derivatives of pentacarbonyl manganese.

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1963, 1348-1350.

TOPIC TAGS: H sub 2 SO sub 4, manganese, Beta-carboalkoxy propionic acid, adipic acid, terephthalic acid, tetrahydrofuran, dioxan, pentacarbonyl manganese.

ABSTRACT: Synthesis and properties of new derivatives are reported which were obtained by the reaction of  $\text{NaMn}(\text{CO})_5$  with the acid chlorides of Beta-carboalkoxy propionic acids and the acid chlorides of adipic and terephthalic acid in a tetrahydrofuran medium. The following were obtained: Beta-carbo(methoxy, ethoxy, propoxy)-propionylpentacarbonyl manganese, adipinyl-bis and p-phthaloyl-bis (pentacarbonyl manganese). The first 3 compounds were soluble in the usual organic solvents, the last 2 in dioxan. All decomposed in  $\text{H}_2\text{SO}_4$ . The last compound yielded p-phenylene-bis (pentacarbonyl manganese) upon heating to 120-125°C. Hydrolysis of Beta-carbomethoxypropionylpentacarbonyl manganese yielded the ketoacid



Card 1/2.

ACCESSION NR: AP5009840

Bromination of the former gave bromopentacarbonyl manganese and Beta-carbomethoxy-propionyl bromide which hydrolyzed to succinic acid. Infrared spectra were determined in the 1630-1645 and 2000-2140  $\text{cm}^{-1}$  range. Upon heating to 100°C CO was incompletely liberated (ketone group in the infrared spectrum), while disintegration with formation of  $\text{Mn}_2(\text{CO})_{10}$  was observed above 100°C, with the exception of the phthaloyl compound. All reactions were conducted in an inert atmosphere. Yields were 75-92%. Orig. art. has: 6 formulas.

ASSOCIATION: Institut elementoorganicheskikh soyadineniy Akademii nauk SSSR  
(Institute of organo-metallic compounds, Academy of sciences, SSSR).

SUBMITTED: 25Feb63

DATE ACQ: 15Aug63

ENCL: 00

SUB CODE: CH

NO REF SCV: 000

OTHER: 006

Card 2/2

NESEYANOV, A.N.; PEREVALOVA, E.G.; YUR'YEVA, L.P.; GRANDEBERG, K.I.

Synthesis of ferrocene derivatives from nitriles of  
ferrocenecarboxylic acids. Izv.AN SSSR.Ser.khim. no.8:1377-1380  
(MIRA 16:9)  
Ag '63.

1. Moskovskiy gosudarstvennyy universitet im. Lomonosova.  
(Ferrocene) (Nitriles) (Ferrocenecarboxylic acid)

BORISOV, A.Ye.; NOVIKOVA, N.V.; NESMEYANOV, A.N.

Triallylatibine. Izv.AN SSSR.Ser.khim. no.8:1506-1507 Ag '63.  
(MIRA 16:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.  
(Stibine)

BORISOV, A.Ye.; OSIPOVA, M.A.; NESMEYANOV, A.N.

Alkenyl compounds of bismuth. Izv.AN SSSR.Ser.khim. no.8:1507-  
1509 Ag '63. (MIRA 16:9)

1. Institut elementoorganicheskikh soyadineniy AN SSSR.  
(Bismuth organic compounds)

KRICHEVSKAYA, O.D.; BELOZERSKIY, N.A.; SEGAL', L.D.; KOLOBOVA, N.Ye.  
ANISIMOV, K.N.; NESMEYANOV, A.N.

Kinetics of the thermal decomposition of solid metal carbonyl  
compounds. Zhur. neorg. khim. 8 no.8:1806-1808 Ag '63.  
(MIRA 16:8)

1. Gosudarstvennyy institut proyektirovaniya nikellevykh predpriyatiy  
i Institut elementoorganicheskikh soyedineiny AN SSSR.  
(Molybdenum carbonyl)  
(Heat of decomposition)  
(Chemical reaction, rate of)

NESMEYANOV, A.N.; ANISIMOV, K.N.; KOLOBOVA, N.Ye.

Synthesis of cyclopentadienyl- and methylcyclopentadienyltricarbonyl-manganese. Izv. AN SSSR Ser.khim. no.10:1880 O '63. (MIRA 17:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

PEREVALOVA, E.G.; USTYNYUK, Yu.A.; NESMEYANOV, A.N.

Reactivity of compounds containing a ferrocenylmethyl group.  
Report No.4: Reaction of ferrocenylmethyllithium. Izv. AN  
SSSR. Ser. khim. no.11:1967-1972 N '63.

Reactivity of compounds containing a ferrocenylmethyl group.  
Report No.5: Preparation of organolithium compounds with  
 $\sigma$ -ferrocenyl alkyl groups. Ibid.:1972-1977 (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

PEREVALOVA, E.G.; USTINYUK, Yu.A.; USTINYUK, L.A.; NESMEYANOV, A.N.

Reactivity of compounds containing a ferrocenylmethyl group.  
Report No.6: Steric effects in reactions of alkylation by  
quaternary ammonium salts. Izv. AN SSSR. Ser. khim. no.11:  
1977-1985 N '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

NESEMEYANOV, A.N.; VIL'CHEVSKAYA, V.D.; KOCHETKOVA, N.S.; PALITSYN, N.P.

Synthesis of phosphorus-containing derivatives of ferrocene.  
Izv. AN SSSR. Ser. khim. no.11:2051-2052 N '63. (MIRA 17:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

NESMEYANOV, A.N.; ANISIMOV, K.N.; VALUYEVA, Z.P.

Chloromethylation of cyclopentadienylmanganese tricarbonyl.  
Izv. AN SSSR. Ser. khim. no.12:2233-2234 D '63.

(MIRA 17:1)

1. Institut elementorganicheskikh soyedineniy AN SSSR.

FILATOV, E.S.; NESMEYANOV, An.N.; CHEPYZHÈV, Yu.B.

Study of the yields of the reaction Br<sup>81</sup> ( , )Br<sup>82</sup> in the system  
CH<sub>2</sub>Br<sub>2</sub> - C<sub>6</sub>H<sub>6</sub>. Vest.Mosk.un. Ser.2:Khim. 18 no.6:45-46 N-D  
'63. (MIRA 17:4)

1. Kafedra radiokhimii Moskovskogo universiteta.

L 10088-63

EWP(j)/EPP(c)/EWT(m)/EIS

Fe-4/Pr-4 RM/WW/KAY

ACCESSION NR: AP3000302

S/0020/63/150/001/0102/0104

AUTHOR: Nesmeyanov, A. N. (Academician); Drozd, V. N.; Sazonova, V. A.

TITLE: Diazo ferrocene compounds

64  
63

SOURCE: AN SSSR. Doklady\*, v. 150, no. 1, 1963, 102-104

TOPIC TAGS: diazo, ferrocene, acidolysis, diazoamino, diazocaminoferrocene, ferrocenediazonium, [(phenyldiazonaminc)cyclopentadienyl]cyclopentadienyliron, 1, 1'-ferrocenylenebisdiazonium

TEXT: Diazo derivatives of ferrocene have been prepared by acidolysis of diazoamino derivatives and their properties studied. Treatment of diazoaminoferrocene with concentrated HCl at -40 to -20C produced a violet solution which gave off nitrogen at temperatures as low as -15C. The presence of (chlorocyclopentadienyl)- and (aminocyclopentadienyl)-cyclopentadienyliron in the solution indicated the formation of a ferrocenediazonium cation intermediate. The existence of this cation was

Card 1/82

L 10088-63

ACCESSION NR: AP3000302

O

confirmed by the fact that similar treatment of [(phenyldiazoamino)-cyclopentadienyl]cyclopentadienyliron (I) also produced a violet solution of ferrocenediazonium. The last reacts with 2-naphthol to form the dark-green dye 1'-ferrocenazo-2-naphthol. The fact that 1-phenylazo-2-naphthol was found among the acidolysis products of I shows that the tautomeric equilibrium of I is shifted toward 1-ferrocenyl-3-phenyltriazene. Ferrocenediazonium can undergo nucleophilic substitution in an HX solution ( $X = Cl, Br, I$ ): nitrogen evolution began at temperatures as low as -15°C and stopped at -5°C, and the (halocyclopentadienyl)cyclopentadienyliron was formed in a yield greater than 70%. Treatment of bis[1-(phenyldiazoamino)cyclopentadienyl]iron with concentrated HCl at -40 to -20°C gave a dark-violet solution containing 1, 1'-ferrocenylenebis diazonium. Orig. art. has: 5 formulas and 1 table.

ASSOCIATION: Moscow State University

Card 2/B2

Card 1/2

L 12919-63

ACCESSION NR: AP3000519

The use of the known tolylsulfonyl azide method gave lower yields of I and II. The reduction of I with aluminum lithium hydride produced a 72% yield of (aminocyclopentadienyl)cyclopentadienyliron, previously obtained for the first time by two other methods at the authors' laboratory. A similar reduction of II produced bis(1-aminocyclopentadienyl)iron, which is unstable and oxidizes rapidly in air. In regard to the chemistry of the ferrocene azides, the addition of I to a strained double bond, such as that in dimethyl exo-cis-3, 6-endo-oxy- $\Delta$ 4-tetrahydropthalate, to form the corresponding triazoline and the formation of

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orig. art. has: 6 formulas and 7 tables.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University)

SUBMITTED: 23Jan63

DATE ACQ: 12Jun63

ENCL: 00

SUB CODE: CH

NO REF Sov: 003

OTHER: 006

Card 2/2

NESMEYANOV, A.N., akademik; ISAYEVA, L.S.; TOLSTAYA, T.P.

Dimethylphenylsulfoxonium salts. Dokl. AN SSSR 151 no.6:1339-1342  
(MIRA 16:10)  
Ag '63.

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova i  
Institut elementoorganicheskikh soyedineniy AN SSSR.

NESEYANOV, A.N., akademik; VIL'CHEVSKAYA, V.D.; KOCHETKOVA, N.S.

Synthesis of 1-ferrocenyl-2-carbomethoxyethylene. Dokl. AN SSSR  
152 no.3:627-628 S '63. (MIRA 16:12)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

NESMEYANOV, A.N., akademik; KOCHETKOVA, N.S.; PETROVSKIY, P.V.; FEDIN, E.I.

Pentaethanodiferrocene. Dokl. AN SSSR 152 no.4:575-578 O '63.  
(MIRA 16:11)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

NESEMEYANOV, A.N., akademik; SAZONOV, V.A.; ROMANENKO, V.I.

Alkylation of ferrocenylamine. Dokl. AN SSSR 152 no.6:1358-  
1359.0 '63. (MIRA 16:11)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.

NESMEYANOV, A.N., akademik; TOLSTAYA, T.P.; GRIB, A.V.

Diphenyl-o,o'-diphenyleneammonium salts. Dokl. AN SSSR 153  
no.3:608-611 N '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.

YEPIFANOVA, A.P.; ISAKOVA, O.V., otv. red.; LIKHTENSHTEIN, Ye.S.,  
otv. red.; SHUNKOV, V.I., otv. red.; KESMEYANOV, A.N.,  
akademik, glav. red.

Boris Nikolayevich IUr'ev. Bibliografiia sost. A.P.Epifanovoi.  
Moskva. Nauka, 1964. 51 p. (Materialy k bibliografii uche-  
nykh SSSR. Seriya tekhnicheskikh nauk. Mekhanika, no.10)  
(MIRA 18:12)

1. Akademiya nauk SSSR.

GORYACHEVA, R.I.; ZAYTSEVA, A.V.; NESMEYANOV, A.N., akademik,  
glav. red.; ISAKOVA, O.V., otv. red.; LIKHTENSHTEYN,  
Ye.S., otv. red.; SHUNKOV, V.I., otv. red.

Aleksandr Vasil'yevich Topchiev. (1907-1962). Moskva,  
Nauka, 1964. 160 p. (Materialy k bibliografii uchenykh  
SSSR. Seriya khimicheskikh nauk no.34) (MIRA 18:3)

1. Akademiya nauk SSSR. 2. Chlen-korrespondent AN SSSR  
(for Shunkov).

GORYACHEVA, R.I.; LIKHTENSTEYN, Ye.S., otv. red.; ISAKOVA, O.V.,  
otv. red.; SHUNKOV, V.I., otv. red.; NESMEYANOV, A.N.,  
akademik, glav. red.; TOPCHIYEV, A.V., akademik, zan.  
glav. red. [deceased]; DRAGUNOV, E.S., red.

Viktor Nikolaevich Kondrat'ev. Vstup. stat'ia V.V. Voevod-  
skogo i A.P. Purmalia. Bibliografiia sost. R.I. Goriachevoi.  
Moskva, Izd-vo "Nauka," 1964. 49 p. (Materialy k biobiblio-  
grafii uchenykh SSSR. Ser. khimicheskikh nauk, no.33)  
(MIRA 17:3)

1. Akademiya nauk SSSR. 2. Chlen-korrespondent AN SSSR (for  
Shunkov).

BEKKER, A. A.; FANO, V.; BABESHKIN, A. N.; NESMEYANOV, A. N.

"The use of the Mossbauer effect in determining the chemical forms of Tin-117<sup>m</sup> recoil atoms in solid compounds of tin."

report presented at IAEA Symp on Chemical Effects associated with Nuclear Reactions and Radioactive Transformations, Vienna, 7-11 Dec 64.

FILATOV, E. S.; KOLTAY, L.; NESMEYANOV, A. N.

"Models of atom-molecule collisions and hot atom reactions."

report presented at IAEA Symp on Chemical Effects associated with Nuclear Reactions and Radioactive Transformations, Vienna, 7-11 Dec 64.

FIRSOVA, L. P.; NESMEYANOV, A. N.; BARAKAT, M. F.; FORYS, M.

"The interaction of C<sup>14</sup> recoil atoms in binary mixtures."

report presented at IAEA Symp on Chemical Effects Associated with Nuclear Reactions and Radioactive Transformations, Vienna, 7-11 Dec 64.

SIMONOV, Ye. F.; NESMEYANOV, A. N.

"Reactions of hot tritium atoms with amino acids."

report presented at IAEA Symp on Chemical Effects associated with Nuclear Reactions and Radioactive Transformations, Vienna, 7-11 Dec 64.

ISAKOVA, O.V.: NESMEYANOV, A.N. akademik slav. red.  
LIKHETENSHTEYN, Ye.S., otv. red.; SHUNKOV, V.I., red.

Aleksandr Ivanovich Oparin. Izd.2., dop. Bibliografiia  
sost. O.V. Isakovoи. Moskva, Nauka, 1964. 109 p. (Mate-  
rialy biobibliografii uchenykh SSSR. Seriya biokhimii,  
no.6) (MIRA 18:4)

1. Akademiya nauk SSSR. 2. Chlen-korrespondent AN SSSR  
(for Shunkov).

NESEMEYANOV, A.N.; PEREVALOVA, E.G.; YUR'YEVA, L.P.; KAKURINA, L.N.

Reaction products of cyanidation of methyl- and ethylferrrocene.  
Izv. AN SSSR. Ser. khim. no.10:1897-1899 O '64. (MIRA 17:12)

1. Institut elementoorganicheskikh soyedineniy AN SSSR i  
Moskovskiy gosudarstvennyy universitet im. Lomonosova.

NESEMEYANOV, A.N.; PEREVALOVA, E.G.; GRANBERG, K.I.

Synthesis of some heterocyclic substituted ferrocenecarboxylic acids. Izv. AN SSSR. Ser. khim. no.10:1903-1905 O '64.  
(MIRA 17:12)

1. Moskovskiy gosudarstvennyy universitet.

KELER, V.R., otv. red.; MILLIONSHCHIKOV, M.D., akademik, red.;  
BLOKHIN, N.N., red.; BLOKHINTSEV, D.I., red.; GNEDENKO,  
B.V., akademik, red.; ZAYCHIKOV, V.M., red.; KELDYSH, M.V.,  
akademik, red.; KIRILLIN, V.A., akademik, red.; KORIUNOV,  
V.V., red.; MONIN, Andrej Sergeyevich, prof., doktor fiz.-  
matem. nauk, red. (1921); NESMEYANOV, A.N., akademik, red.;  
PARIN, V.V., red.; REBINDER, P.A., akademik, red.; SEMENOV,  
N.N., akademik, red.; FOK, V.A., akademik, red.; FRANTSOV,  
G.P., akademik, red.; ENGEL'GARDT, V.A., akademik, red.;  
KREMNEVA, G., red.; BALASHOVA, A., red.; BERG, A.I., akademik, red.

[Science and mankind, 1964; simple and precise information  
about the principal developments in world science] Nauka i  
chelovechestvo, 1964.; dostupno i tochno o glavnom v miro-  
voi nauke. Moskva, Izd-vo "Znanie," 1964. 424 p.  
(MIRA 18:1)

1. Deystvitel'nyy chlen AMN SSSR (for Blokhin, Parin); 2. Chlen-  
korrespondent AN SSSR (for Blokhintsev). 3. Akademiya nauk  
SSSR Ukr. SSR (for Gnedenko).

NESEMEYANOV, Aleksandr Nikolayevich; SOKOLIK, Rozaliya Abramovna;  
KOCHESHKOV, K.A., otv. red.; OKHLOBYSTIN, O.Yu., red.;  
NOVICKOV, N.D., tekhn. red.

[Methods of metallo-organic chemistry; boron, aluminum,  
gallium, indium, thallium] Metody elementoorganicheskoi  
khimii; bor, aluminii, galii, indii, tallii. Moskva,  
Izd-vo "Nauka," 1964. 499 p. (MIRA 17:4)

1. Chlen-korrespondent AN SSSR (for Kocheshkov).

BRAUNSHTEYN, A.Ye., akademik, otv. red.; BAVEV, A.A., zam. otv. red.; NESMEYANOV, A.N., akademik, red.; TAMM, I.Ye., akademik, red.; VENKSTEIN, T.V., zam. otv. red.

[Molecular biology; problems and perspectives. On the 70th birthday of Academician V.A.Engel'gardt] Molekuliarnaia biologija; problemy i perspektivy. K 70-letiiu so dnia rozhdenija akademika V.A.Engel'gardta. Moskva, Nauka, 1964. 342 p. (MIRA 18:1)

1. Akademiya nauk SSSR. Institut radiatsionnoy i fiziko-khimicheskoy biologii.

ACCESSION NR: AF4010041

S/0062/64/000/001/0070/0073

AUTHORS: Usty\*nyuk, Yu.A.; Perevalova, E.G.; Neesmeyanov, A.N.

TITLE: The reactive ability of compounds containing the ferrocenyl-methyl group Report No.8. Wittig rearrangement in a series of ferrocenylcarbinol ethers

SOURCE: AN SSSR. Izvestiya. Ser. khim., no.1, 1964, 70-73

TOPIC TAGS: ferrocenylmethyl group, Wittig rearrangement, ferrocenyl-carbinol ethers, butyl lithium, lithium ether linkage, ether isomerization, anionic center stabilization, 1 phenyl 2 ferrocenylethanol, 2 phenyl 1 ferrocenylethanol, 1,2 diferrocenylethanol, 1,2 diferrocenyl-ethylene

ABSTRACT: In continuation of earlier work, this rearrangement was studied for the benzylferrocenylmethyl and bisferrocenylmethyl ethers under the influence of butyllithium and tetrahydrofuran. During reaction with the first compound a 55% yield of 1-phenyl-2-ferrocenyl-ethanol-1 was obtained without formation of its 2-phenyl-1-ferrocenyl-

Card 1/2

ACCESSION NR: AP4010041

ethanol isomer, while reaction of the second yielded 1,2-diferrocenyl-ethanol. The latter rearrangement proceeded with less ease, with a yield of only 23% and a 27% residue of unchanged starter ether. The product of the second rearrangement was converted into 1,2-diferrocenylethylene by dehydration; this latter is a red crystalline substance, m.p. 264-265, soluble in hot benzene, toluene and chloroform. The new data confirmed earlier findings, i.e., that the ferrocenyl nucleus will stabilize the adjoining carbonation center to a lesser degree than the benzene ring. The laboratory procedure, the products obtained, and their description and IR spectra are reported. "The authors wish to thank O.T. Nikitina for determining the molecular weight." Orig. art. has: 4 formulas.

ASSOCIATION: Institut elementoorganicheskikh soedineniy Akademii nauk SSSR (Institute of Organoelemental Compounds, Academy of Sciences SSSR); Moskovskiy gosudarstvennyi universitet im. M.V. Lomonosova (Moscow State University)

SUBMITTED: 10Sep62

DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: OH

MR REF Sov: 004 OTHER: ) 004

Card 2/2

NESMEYANOV, A.N.; NIKITINA, T.V.; PEREVALOVA, E.G.

Condensation of ferrocenylamine with nitrosobenzene. Izv.AN  
SSSR. Ser.khim. no.1:197-199 Ja '64. (MIRA 17:4)

1. Moskovskiy gosudarstvennyy universitet i Institut elementoorganicheskikh soyadineniy AN SSSR.

I. 33283-66 EMP(j)/EMT(m) RM  
ACC NR: AR6017230

SOURCE CODE: UR/0058/65/000/012/D027/D027

AUTHORS: Yavorskiy, B. M.; Zaslavskaya, G. B.; Kochetkova, N. S.; Besmeyanov, A. E.

TITLE: Absorption spectra of certain derivatives of ferrocene 1

39  
B

SOURCE: Ref. zh. Fizika, Abs. 12D218

REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR, t. 3, vyp. 1, 1964, 350-354

TOPIC TAGS: absorption spectrum, ferrocene, absorption band

ABSTRACT: The authors investigated the absorption spectra of ferrocene, of its alkyl and acyl derivatives in the region 300--180 nm, and also the absorption spectra of carboxylic acids of ferrocene and their ethers in the 180-230 nm region. The oscillator strengths of all the investigated bands are calculated for absorption. Earlier deductions concerning the position of the bands and the laws governing their shifts are confirmed. [Translation of abstract]

SUB CODE: 20 ,07/

Card 1/1 *sf*

NESMEYANOV, A. N.; EPSHTEYN, L. M.; ISAYEVA, L. S.; TOISTAYA, T. P.;  
KAZITSYNA, L. A.

Infrared spectra of diphenylhalo onium and triphenyl oxonium  
salts in the region 400-750 cm<sup>-1</sup>. Izv AN SSSR Ser Khim no. 4:  
613-618 Ap '64. (MIRA 17:5)

1. Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova.

ACCESSION NR: AP4033393

S/0062/64/000/004/0763/0764

AUTHOR: Nesmeyanov, A. N.; Anisimov, K. N.; Valuyeva, Z. P.

TITLE: Phosphorylation of cyclopentadienylmanganeseetrincarbonyl

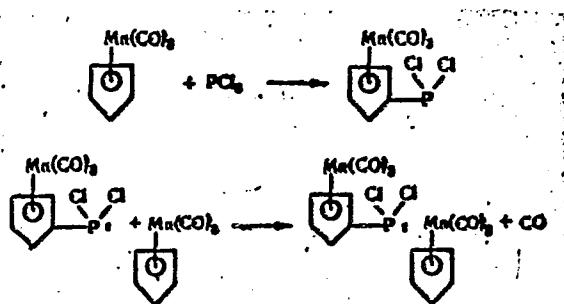
SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 4, 1964, 763-764

TOPIC TAGS: cyclopentadienylmanganeseetrincarbonyl, phosphorylation, cyclopentadienylmanganeseetrincarbonyl phosphorus derivative

ABSTRACT: Cyclopentadienylmanganeseetrincarbonyl was phosphorylated with  $\text{PCl}_3$  (in a 1:4 molar ratio) in the presence of  $\text{AlCl}_3$  and isopentane to form, in 28% yield, a phosphorus derivative having the probable structure  $\text{C}_5\text{H}_5\text{Mn}(\text{CO})_2\text{PCl}_2\text{C}_5\text{H}_4\text{Mn}(\text{CO})_3$ , boiling at 86-87°C:

Card 1/2

ACCESSION NR: AP4033393



Orig. art. has: 1 set of equations

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR  
(Institute of Organometallic Compounds, Academy of Sciences SSSR)

SUBMITTED: 02Oct63

DATE ACQ: 15May64

ENCL: 00

SUB CODE: GC

NO REF SOV: 003

OTHER: 003

Card 2/2

NESEMEYANOV, A.N.; KOLOBOVA, N.Ye.; ANISIMOV, K.N.; BARYSHNIKOV, L.I.

Sulfonation and mercuration of cyclopentadienyl rhenium carbonyl.  
Izv. AN SSSR. Ser. khim. no.6:1134 Je '64.

(MIRA 17:11)

I. Institut elementoorganicheskikh soyedineniy AN SSSR.

NESMEYANOV, A.N.; BORISOV, A.Ye.; NOVIKOVA, N.V.

Trialkenyldialkyl and trialkenyldiaryl compounds of antimony.  
Izv. AN SSSR Ser. khim. no.7:1197-1202 Jl '64.

(MIRA 17:8)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

NESEMEYANOV, A.N.; ANISIMOV, K.N.; KOLOBOVA, N.Ye.; ZLOTINA, I.B.

Homologs of cyclopentadienylmanganese tricarbonyl. Izv.  
AN SSSR Ser. khim. no.7:1326-1327 J1 '64.  
(MIRA 17:8)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

ACCESSION NR: AP4042882

S/0062/64/000/007/1356/1356

AUTHOR: Nesmeyanov, A. N.; Anisimov, K. N.; Kolobova, N. Ye.

TITLE: Manganese pentacarbonyl derivatives

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1964,  
1356

TOPIC TAGS: manganese pentacarbonyl derivative, furoylmanganese  
pentacarbonyl, furylmanganese pentacarbonyl

ABSTRACT: In a continuation of research on derivatives of manganese pentacarbonyl, a new compound, 2-furoylmanganese pentacarbonyl, has been prepared. Synthesized from 2-furoyl chloride and manganese sodium pentacarbonyl in quantitative yield, it is light yellow, insoluble in water, and soluble in organic solvents, with mp = 72—73°C. On melting, it liberates one molecule of CO to form 2-furylmanganese pentacarbonyl, with bp = 28°C (10<sup>-3</sup> mm Hg). Orig. art. has: 2 formulas.

Card 1/2

ACCESSION NR: AP4042882

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii  
nauk SSSR (Institute of Organoelemental Compounds, Academy of  
Sciences SSSR)

SUBMITTED: 29Apr64

ATD PRESS: 3075

ENCL: 00

SUB CODE: IC, OC

NO REF Sov: 001

OTHER: 000

Card  
2/2

NESEMEYANOV, A.N.; KRITSKAYA, I.I.

Formation of ferrocenylcarbinol ethers and their hydrolysis  
by adsorption chromatography. Izv. AN SSSR Ser. khim. no.12:  
2160-2165 D '64 (MIRA 18:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

NESMEYANOV, A.N., akademik; ANISIMOV, K.N.; KLOBOVA, N.Ye.;  
ZLOTINA, I.B.

Reduction of cyclopentadienylmanganese tricarbonyl  
ketones and dehydration of secondary alcohols. Dokl.  
AN SSSR 154 no.2:391-394 Ja'64. (MIRA 17:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

NESMEYANOV, A.N., akademik; ANISIMOV, K.N.; KOLOBOVA, N.Ye.; BARYSHNIKOV,  
L.I.

Acylation of cyclopentadienylrhenium tricarbonyl. Dokl. AN SSSR  
154 no. 3:646-647 Ja '64. (MIRA 17:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

NESMEYANOV, A.N., akademik; ANISIMOV, K.N.; KOLOBOVA, N.Ye.; ZLOTINA, I.B.

Reaction of cyclopentadienylmanganese tricarbonyl ketones  
with Norman's reagent. Dokl. AN SSSR 154 no.4:871-873 F '64.  
(MIRA 17:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

ACCESSION NR: AP4016507

S/0020/84/154/005/1113/1115

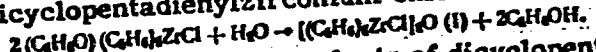
AUTHOR: Braymina, E. M.; Freydlina, R. Kh. (Corresponding member);  
Nesmeyanov, A. N. (Academician)

TITLE: Cyclopentadienyl compounds of zirconium containing the Zr-O-Zr group

SOURCE: AN SSSR. Doklady\*, v. 154, no. 5, 1964, 1113-1115

TOPIC TAGS: cyclopentadienyl zirconium compound, Zr-O-Zr group, zirconoxane compound, tetracyclopentadienyldizirconoxane dichloride, dicyclopentadienyl-zirconium dichloride hydrolysis, IR spectrum

ABSTRACT: Tetracyclopentadienyldizirconoxane dichloride (I) was prepared by hydrolysis of ethoxydicyclopentadienylzirconium chloride (II):



Compound (I) may also be prepared by hydrolysis of dicyclopentadienylzirconium dichloride (III) in water in the presence of alcohol and an amine. Compounds of the (II) type are prepared by reaction of compound (III) with an alcohol in the

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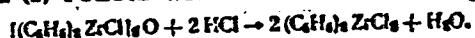
presence of triethylamine:



Compound (I) reacts with acetylacetone to form cyclopentadienyldiacetonylacetone-  
ate of zirconium chloride:



and compound (I) reacts with HCl to form compound (III):



Compound (I) is a crystalline compound, readily decomposed, soluble in benzene  
and chloroform, and insoluble in hexane and ether. It was identified by its ele-  
mental analysis, molecular weight and IR spectrum. It is suggested that the  
compound identified as  $\text{C}_{10}\text{H}_9\text{ZrCl}$  (E. Samuel and R. Setton, C. R., 256, no. 2,  
443 (1963)) is actually the above compound (I). "IR spectra were obtained in the  
Spectroscopic Laboratory of the Institute of Natural Compounds AN SSSR by  
G. G. Dvoryantsev, for which we express deep appreciation." Orig. art. has:  
5-equations.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR

Card 2/3

ACCESSION NR: AP4016507

(Institute of Organometallic Compounds, Academy of Sciences SSSR)

SUBMITTED: 22Oct63 DATE ACQ: 12Mar64 ENCL: 00

SUB CODE: CH NO REF SOV: 002 OTHER: 002

3/3  
Card

ACCESSION NR: AP4019977

S/0020/64/154/006/1393/1394

AUTHORS: Nesmeyanov, A.N. (Academician); Sazonova, V.A.; Drozd, V.N.

TITLE: Decomposition of alpha-ferrocenylcarbonic ions to fulvenes

SOURCE: AN SSSR. Doklady\*, v. 154, no. 6, 1964, 1393-1394

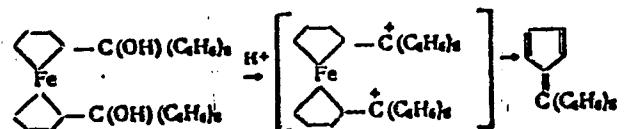
TOPIC TAGS:decomposition, alpha ferrocenylcarbonic ion, fulvene, diphenyl ferrocenylcarbinol, ferrocene derivative, diphenylfulvene

ABSTRACT: Since N-methyl-2-ferrocenylpyridine hydroxide decomposes in sunlight to form N-methyl-2-cyclopentadienylide-pyridine, cyclopentadiene and Fe<sup>2+</sup>, it is hypothesized that the positive charge in the atom, combined with a ferrocene molecule, weakens the iron carbide bond. This hypothesis is shown to be true for certain α-ferrocenylcarbonic ions. The increased facility of their formation from corresponding carbinols and their esters is known because of the stabilizing effect of the free electronic vapor of iron. The carbide cations, being formed from diphenylferrocenyl-carbinol and 1,1-bis(-hydroxy-benzhydryl)-ferrocene in acetic acid in the presence of HCl, are exceptionally unstable and decomposed in

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ACCESSION NR: AP4019977

several minutes:



diphenylfulvene was precipitated from the reaction mixture. Orig.  
art. has: 00

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V.  
Lomonosova (Moscow State University)

SUBMITTED: 27Nov63

DATE ACQ: 23Mar64

ENCL: 00

SUB CODE: CH

NR REF SOV: 002

OTHER: 004

Card 2/2

NESMEYANOV, A.N., akademik; BORISOV, A.Ye.; SAVEL'YEVA, I.S.

Acidolysis kinetics of symmetrical aromatic and aliphatic compounds of mercury. Dokl. AN SSSR 155 no. 3 603-606 Mr '64.  
(MIRA 17:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

PEREVALOVA, E.G.; BUBIN, S.P.; SMIRNOVA, S.A.; NESMEYANOV, A.N.,  
akademik

Redox potentials of heteroannual disubstituted ferrocenes.  
Dokl. AN SSSR 155 no. 4:857-860 Ap '64. (MIRA 17:5)

1. Moskovskiy gosudarstvennyy universitet im. Lomonosova i.  
Institut elementoorganicheskikh soyedineniy AN SSSR.

NESMEYANOV, A.N., akademik; SAZONOVA, V.A.; ROMARENKO, V.I.; RODIONOVA, N.A.; ZOL'NIKOVA, G.P.

Photolysis of ferrocene derivatives. Dokl. AN SSSR 155 no. 5:  
1130-1133 Ap '64. (MIRA 17:5)

1. Monkovskiy gosudarstvennyy universitet im. M.V.Lomonosova.

ACCESSION NR: AP4035814

8/0020/64/156/001/0099/0101

AUTHOR: Nesmeyanov, A. N. (Academician); Kochetkova, N. S.; Vitt, S. V.; Bondarev, V. B.; Kovstov, Ye. I.

TITLE: Alkylation of ferrocenes

SOURCE: AN SSSR. Doklady\*, v. 156, no. 1, 1964, 99-101

TOPIC TAGS: ferrocene, alkylation, Friedel Crafts, ethylferrocene, diethylferrocene, triethylferrocene, tert butylferrocene, butyl ferrocene, preparation, IR spectra, NMR spectra

ABSTRACT: In this work ferrocenes were alkylated to give 80-90% yields, in comparison with the Friedel Crafts methods which give 20-30% of alkylates. Ferrocene was reacted with ethylbromide in the presence of equimolar amounts of  $\text{AlCl}_3$  and  $\text{LiAlH}_4$  in n-heptane; the reaction products were water extracted and the organic portion subjected to vacuum distillation. The 100-130°C (at 1 mm Hg) fraction contained ethylferrocene and isomers of diethylferrocene, and the 130-150°C/1mm fraction contained a mixture of isomeric triethylferrocenes. Mono-, di-, tri- and tetra-tert-butylferrocenes were similarly prepared. IR and NMR

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ACCESSION NR: AP4035814

indicated the third and fourth tert-butyl group is attached to the second g ring.  
"NMR spectra were obtained on NMR spectrograph TsIA-5535 at 40 megacycles by  
E. I. Fediny<sup>m</sup> and P. V. Petrovsk, for which the authors express their sincere  
appreciation. Orig. art. has: 2 tables.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR  
(Institute of Organometallic Compounds Academy of Sciences SSSR)

SUBMITTED: 03Feb64

ENCL: 00

SUB CODE: OC

NO REF Sov: 005

OTHER: 003

Card

2/2

NESMEYANOV, A.N., akademik; ANISIMOV, K.N.; KOLOBOVA, N.Ye.;  
KHANDOZHEKO, V.N.

Mixed bimetallic organic derivatives of rhenium carbonyl.  
Dokl. AN SSSR 156 no. 2 383-385 My '64. (MIRA 17:7)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

NESMEYANOV, A.N., akademik; ANISIMOV, K.N.; KOLOBOVA, N.Ye.; ZAKHAROVA,  
M. Ya.

Bimetallic derivatives of the carbonyls of chromium, molybdenum,  
and tungsten. Dokl. AN SSSR 156 no. 3:612-615 '64. (MIRA 17:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

NESEMEYANOV, A.N., akademik; ANISIMOV, K.N.; VALUYEVA, Z.F.

Chloromethylcyclopentadienylmanganese tricarbonyl. Dokl. AN  
SSSR 157 no. 3:622-625 J1 '64. (MIRA 17:7)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

NESMEYANOV, A.N., akademik; ANISIMOV, K.N.; KOLOBOVA, N.Ye.; MAGOMEDOV,  
G.K. - I.

Isomerization of 2-hydroxy-4-pentyn-2-yl-cyclopentadienyl-  
manganese tricarbonyl and 2-hydroxy-2-phenyl-4-methylpentyne  
to the respective enones. Dokl. AN SSSR 158 no.1:163-166  
S - O '64 (MIRA 17:8)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

NESMEYANOV, A.N., akademik; RYBINSKAYA, M.I.

Synthesis of 1,2,3-triazoles with electron-acceptor substituents. Dokl.  
AN SSSR 158 no.2:408-410 S '64. (MIRA 17:10)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

NESMEYANOV, A.N., akademik; ANISIMOV, K.N.; KOLOBOVA, N.Ye.; BESHCHASTNOV, A.S.

Binuclear derivatives of the carbonyls of molybdenum, manganese,  
and rhenium. Dokl. AN SSSR 159 no.2:377-378 N '64.

(MIRA 17:12)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

NESMEYANOV, A.N., akademik; DVORYANTSEVA, G.G.; KOCHETKOVA, N.S.;  
MATERIKOVA, R.B.; SHEYNKER, Yu.N.

Properties and structure of dicyclopentadienylmercury. Dokl.  
AN SSSR 159 no.4:847-850 D '64 (MIRA 18:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

NESMEYANOV, A.N., akademik; DROZD, V.N.; SAZONOVA, V.A.; POSTNOV, V.N.

Some properties of diazo compounds of ferrocene. Dokl. AN SSSR  
159 no.6:1334-1337 D '64 (MIRA 18:1)

1. Moskovskiy gosudarstvennyy universitet.

GUBIN, S.P.; GRANDBERG, K.I.; PEREVALOVA, E.G.; NESMEYANOV, A.N., akademik

Transannular electron effects in the ferrocenyl nucleus. Dis-  
sociation constants of substituted ferrocenecarboxylic acids.  
Dokl. AN SSSR 159 no. 5:1075-1078 D '64 (MIRA 18:ii)

1. Institut elementoorganicheskikh soyedineniy AN SSSR i Moskov-  
skiy gosudarstvennyy universitet.

YEPIFANOVA, A.P.; NESMEYANOV, A.N., akademik, glav. red.; ISAKOVA,  
O.V., otv. red.; LIKHTENSHTEYN, Ye.S., otv. red.;  
SHUNKOV, V.I., otv. red.

[A.I.Berg] Aksel' Ivanovich Berg. Vstup. stat'ia I.V.  
Brenova. Bibliografiia sostavlena A.P.Epifanovoi. Mo-  
skva, Nauka, 1965. (Materialy k biobibliografii uche-  
nykh SSSR. Seriia tekhnicheskikh nauk: Radiotekhnika,  
no.2) (MIRA 19:1)

1. Akademiya nauk SSSR. 2. Chlen-korrespondent AN SSSR  
(for Shunkov).